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EXAMINER
PHILLIPS, HASSAN A

ART UNIT	PAPER NUMBER
2151	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/739,844	BONEFAS ET AL.	
	Examiner	Art Unit	
	Hassan Phillips	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to amendments received on June 1, 2004.

Claim Objections

1. After consideration of the amendments to claims 1, 2, 5, 9, 12, and 16, the objection of the claims stands. Furthermore, newly added claim 19 is also objected to for the following informalities: In claims 1, 2, 5, 9, 12, 16, and 19, the phraseology "adapted to" is not a positive limitation since it only requires the ability to perform a function. The phrase "adapted to", therefore, does not constitute a limitation in any patentable sense, *in re Hutchinson, 69 USPG 138*. Appropriate correction is required.

2. Claim 34 is objected to because of the following informalities: There is a minor spelling error in line 6. The word "underling" should be "underlying". Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 36 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 36 recites the limitation "said protocol gateways" in the second to last line of the claim. There is insufficient antecedent basis for this limitation in the claim. In order for the examiner to advance prosecution the examiner has interpreted “said protocol gateway” to be “a protocol gateway”.

Response to Arguments

1. Applicant's arguments filed June 1, 2004, with respect to claims 1-4, and 12-18, have been fully considered but they are not persuasive. With respect to claims 1-4, applicant argues that modifying Ramasubramani with Boyle would result in Ramasubramani utilizing a device ID to obtain updates, not a protocol gateway comprising means for authenticating an origin of a message. More specifically, applicant argues, on page 21, paragraph 2, that the teachings of Boyle fail to disclose:

a) A protocol gateway comprising a means for authenticating an origin of a message, wherein the authenticating means authenticates the origin before the message is routed by a message router, and a database, which is accessible by a message router and adapted to store information relating to routing and authentication of the message.

Examiner respectfully submits that Applicant has misinterpreted the prior art of record. In regards to item a), Boyle teaches a link server 114 comprising a means for authenticating an origin of a message, wherein the authenticating means authenticates the origin before the message is routed, (col. 14, lines 21-34). Boyle also teaches a database 328, which is accessible by the link server and adapted to store information relating to routing and authentication of the message, (col. 8, lines 52-67, col. 9, lines 1-2). The examiner utilized Boyle to merely show that authenticating the origin of messages was well known in the art at the time of the present invention, and thus, given the teachings of Boyle, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani in order to show the protocol gateway taught by Ramasubramani comprising a means for authenticating an origin of a message, wherein the authenticating means authenticates the origin before the message is routed by a message router, and a database, which is accessible by a message router and adapted to store information relating to routing and authentication of the message. This would have verified the integrity of the message by ensuring that the message is valid, authorized, and unaltered, before establishing a communication session, Boyle, col. 2, lines 29-56.

With respect to claims 12-18, applicant argues that Mann does not disclose a client device dividing a command or response, or a protocol gateway defining a maximum segment size, determining if a message exceeds a maximum segment size, and segmenting a message into message segments. More specifically, applicant

argues, on page 23, paragraph 5, and on page 24, paragraph 4 that the teachings of Ramasubramani and Boyle fail to disclose:

b) Segmenting a message into one or more message segments within one of a plurality of client devices or protocol gateways, none of the message segments exceeding a maximum segment size and determining that at least one message segment constitutes a complete message at one of the plurality of client devices.

The examiner respectfully submits that Applicant has misinterpreted the prior art of record. In regards to item b), although it may by a misprint by the applicant, the examiner has admitted that Ramasubramini and Boyle fail to expressly show segmenting a message into one or more message segments within one of a plurality of client devices or protocol gateways, none of the message segments exceeding a maximum segment size and determining that at least one message segment constitutes a complete message at one of the plurality of client devices. Instead, Mann makes up for this deficiency. Mann teaches determining if a message exceeds a maximum segment size, and segmenting the message into one or more message segments by a client or server, none of which exceeds the maximum segment size, (col. 8, lines 39-41, col. 9, lines 30-33). It is also implicit in the teachings of Mann that at least one message segment constitutes a complete message at one of the plurality of client devices since each message transmitted includes one or more message segments, (col. 5, lines 30-34), and each of the plurality of client devices assembles the complete response message from the message segment(s) received, (col. 5, lines 42-49). The examiner

utilized Mann to merely show that message segmentation was well known in the art at the time of the present invention. Furthermore, being that client devices, servers, and gateways all have similar functionality, given the teachings of Mann, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani in order to show segmenting a message into one or more message segments within one of the plurality of client devices or protocol gateways taught by Ramasubramani, none of the message segments exceeding a maximum segment size and determining that at least one message segment constitutes a complete message at one of the plurality of client devices. This would have allowed for efficiently transmitting messages without having to rely on a particular delivery path, Mann et al., col. 5, lines 42-52.

In addition, the Examiner has interpreted the claim language as broadly as possible. It is also the Examiner's position that Applicant has not yet submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in a manner that distinguishes over the prior art.

Failure for Applicant to significantly narrow definition/scope of the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response and reiterated the need for Applicant to define the claimed invention more distinctly.

Accordingly the references supplied by the examiner in the previous office action covers the claimed limitations for claims 1-4, and 12-18. The rejections are thus

sustained. Applicant is requested to review the prior art of record for further consideration.

2. Applicant's arguments with respect to claims 5-11, and newly added claims 19-41, have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani et al. (hereinafter Ramasubramani), U.S. Patent 6,507,589, and further in view of Boyle et al. (hereinafter Boyle), U.S. Patent 6,138,158.

3. In considering claim 1, Ramasubramani et al. discloses a method and apparatus for providing network access over different wireless networks comprising:

a) client devices, 202, 204, 206, for accessing the internet, (col. 5, lines 57-67, col. 6, lines 1-9);

b) servers providing services for wireless communication devices, (col. 6, lines 25-39);

c) a plurality of wireless networks, each adapted to communicate messages between the client and the server, and support one or more wireless protocols, (col. 5, lines 61-67, col. 6, lines 1-9);

d) a protocol gateway 214 encapsulating a fundamental network protocol, which underlies each of said one or more wireless network protocols, and communicates messages between the client and the server over a selected wireless network protocol independent of the selected wireless protocol, (col. 6, lines 10-24);

e) a message router for routing a message between the protocol gateway and the server, (col. 13, lines 42-56, col. 10, lines 60-62).

Although the disclosed method of Ramasubramani et al. shows substantial features of the claimed invention, it fails to explicitly disclose:

a) a means for authenticating an origin of a message before the message is routed, and a database relating to the routing and authentication of the message.

Nevertheless, in a similar field of endeavor where messages are communicated between client devices and servers, Boyle et al. discloses a method comprising:

a) authenticating an origin of a message, wherein said authenticating means authenticating the origin before the message is routed by a link server 114, (col. 14, lines 21-34);

b) a database 328, which is accessible by the link server and adapted to store information relating to routing and authentication of the message, (col. 8, lines 52-67, col. 9, lines 1-2).

Authenticating the origin of messages by routers is well known in the art. Thus, given the teachings of Boyle et al., it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani et al., in order to authenticate the origin of a message before routing the message between the protocol gateway and the server. This would have verified the integrity of the message by ensuring that the message is valid, authorized, and unaltered. Therefore, it would have been apparent to one of ordinary skill in the art to provide a router to authenticate the origin of a message in order to provide data identification while maintaining a secure system, Boyle et al., col. 2, lines 29-56. Therefore, the claimed inventions (claims 1 and 6-8) would have been an obvious modification of the methods disclosed by Ramasubramani et al., in view of Boyle et al.

4. In considering claim 2, although the disclosed method of Ramasubramani et al. shows substantial features of the claimed invention, it fails to explicitly disclose:

a) a transport layer application that defines a maximum segment size, determines the message exceeds the maximum segment size, and segments the message into a plurality of message segments that don't exceed the maximum segment size.

Nevertheless, the method of Boyle et al. teaches:

a) an application 412 that defines a maximum segment size, determines if the message exceeds the maximum segment size, and segments the message into a plurality of message segments, none of which exceeds the maximum segment size, (col. 13, lines 37-48).

Message segmentation is well known in the art. Thus, given the teachings of Boyle et al., it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani et al., in order to segment messages in the protocol gateway by a transport layer application. This would have allowed messages exceeding the bandwidth of the system to be delivered, instead of discarded. Thus, it would have been apparent to one of ordinary skill in the art to segment messages that exceed the bandwidth of the system in order to ensure that messages larger than the bandwidth of the system are still delivered, Boyle et al., col. 3, lines 15-27. Therefore, the claimed inventions (claims 2) would have been an obvious modification of the methods disclosed by Ramasubramani et al., in view of Boyle et al.

5. In considering claim 3, see Ramasubramani et al., col. 8, lines 20-35.

6. In considering claim 4, see Ramasubramani et al., col. 8, lines 20-35.

7. Claim 5, is rejected under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani in view of Frailong et al. (hereinafter Frailong), U.S. Patent 6,012,100.

8. In considering claim 5, Ramasubramani discloses a method and apparatus for providing network access over different wireless networks comprising:

a) a protocol gateway 214 encapsulating a fundamental network protocol, which underlies each of said one or more wireless network protocols, and communicates messages between client devices and servers over a selected wireless network protocol through the protocol gateway, independent of the selected wireless protocol, (col. 6, lines 10-24);

b) a message router for routing a message between the protocol gateway, and a server on the Internet, (col. 13, lines 42-56, col. 10, lines 60-62).

Although the disclosed method of Ramasubramani et al. shows substantial features of the claimed invention, it fails to explicitly disclose:

c) the protocol gateway being remotely manageable.

Nevertheless, in a similar field of endeavor, Frailong teaches a system for configuring a gateway comprising:

c) the gateway being remotely manageable, (col. 5, lines 18-34).

Thus, given the teachings of Frailong, it would have been apparent to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani , in order to make the protocol gateway remotely manageable. Doing so would have minimized the clients responsibilities by configuring and maintaining the protocol gateway remotely, Frailong, col. 2, lines 33-38.

9. Claims 6-11, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani in view of Frailong, and further in view of Boyle.

10. In considering claims 6-8, Ramasubramani discloses a method and apparatus for providing network access over different wireless networks comprising:

a) client devices, 202, 204, 206, for accessing the internet, (col. 5, lines 57-67, col. 6, lines 1-9);

b) servers providing services for wireless communication devices, (col. 6, lines 25-39);

c) a plurality of wireless networks, each adapted to communicate messages between the client and the server, and support one or more wireless protocols, (col. 5, lines 61-67, col. 6, lines 1-9);

d) a protocol gateway 214 encapsulating a fundamental network protocol, which underlies each of said one or more wireless network protocols, and communicates messages between the client and the server over a selected wireless network protocol independent of the selected wireless protocol, (col. 6, lines 10-24);

e) a message router for routing a message between the protocol gateway and the server, (col. 13, lines 42-56, col. 10, lines 60-62).

Although the disclosed method of Ramasubramani shows substantial features of the claimed invention, it fails to explicitly disclose:

b) a means for authenticating an origin of a message before the message is routed, and a database relating to the routing and authentication of the message.

Nevertheless, in a similar field of endeavor where messages are communicated between client devices and servers, Boyle discloses a method comprising:

b) authenticating an origin of a message, wherein said authenticating means authenticating the origin before the message is routed by a link server 114, (col. 14, lines 21-34);

c) a database 328, which is accessible by the link server and adapted to store information relating to routing and authentication of the message, (col. 8, lines 52-67, col. 9, lines 1-2).

Authenticating the origin of messages by routers is well known in the art. Thus, given the teachings of Boyle, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani and Frailong, in order to authenticate the origin of a message before routing the message between the protocol gateway and the server. This would have verified the integrity of the message by ensuring that the message is valid, authorized, and unaltered. Therefore, it would have been apparent to one of ordinary skill in the art to provide a router to authenticate the origin of a message in order to provide data identification while maintaining a secure system, Boyle, col. 2, lines 29-56.

11. In considering claim 9, although the disclosed method of Ramasubramani shows substantial features of the claimed invention, it fails to explicitly disclose:

a) a transport layer application that defines a maximum segment size, determines the message exceeds the maximum segment size, and segments the message into a plurality of message segments that don't exceed the maximum segment size.

Nevertheless, the method of Boyle teaches:

a) an application 412 that defines a maximum segment size, determines if the message exceeds the maximum segment size, and segments the message into a plurality of message segments, none of which exceeds the maximum segment size, (col. 13, lines 37-48).

Message segmentation is well known in the art. Thus, given the teachings of Boyle, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani, in order to segment messages in the protocol gateway by a transport layer application. This would have allowed messages exceeding the bandwidth of the system to be delivered, instead of discarded. Thus, it would have been apparent to one of ordinary skill in the art to segment messages that exceed the bandwidth of the system in order to ensure that messages larger than the bandwidth of the system are still delivered, Boyle, col. 3, lines 15-27.

12. In considering claim 10, see Ramasubramani, col. 8, lines 20-35.

13. In considering claim 11, see Ramasubramani, col. 8, lines 20-35.

14. Claims 12-18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani et al., and further in view of Mann et al., U.S. Patent 5,167,035.

15. In considering claim 12, Ramasubramani et al. discloses a method a method of routing a message in a communications system comprising:

a) a server adapted to run a server application, (col. 6, lines 25-39);

b) a plurality of agents coupled to the server, (col. 7, lines 1-5);

c) a plurality of protocol gateways, each of which is coupled to each one of the plurality of agents, (col. 3, lines 50-67, col. 4, lines 1-7);

d) a wireless network adapted to couple a server, through the plurality of agents, and the protocol gateway, to a plurality of client devices, each of which is adapted to run a client application, (Fig.'s 6-9, and col.9, lines 26-32);

e) transmitting a message from one of the plurality of client devices and receiving the message at the protocol gateway, (col. 13, lines 56-67);

f) transmitting from a protocol gateway to one of a plurality of client devices an acknowledgment message, (col. 7, lines 1-33);

g) transmitting from a protocol gateway through an agent a message, and routing the message to a server on the Internet, (col. 7, lines 1-12).

Although the disclosed method of Ramasubramani et al. shows substantial features of the claimed invention, it fails to explicitly disclose:

a) segmenting the message into one or more message segments, and determining if the message exceeds a defined maximum size;

b) determining at one of the plurality of client devices, that at least one message segment constitutes a complete message.

Nevertheless, in a similar field of endeavor where messages are communicated between client devices and servers, Mann et al. discloses a method comprising:

a) within a client device, defining a maximum segment size, (col. 8, lines 39-41, col. 9, lines 28-30);

b) within a client device, determining if the message exceeds the maximum segment size, and segmenting the message into one or more message segments, none of which exceeds the maximum segment size, (col. 8, lines 39-41, col. 9, lines 30-33);

c) determining at a client device that at least one message segment constitutes a complete message, (col. 5, lines 30-49).

In the methods taught by Ramasubramani et al. it is obvious that the agents are acting as routers in routing messages to and from servers located on the Internet. It is also obvious in the methods taught by Ramasubramani et al. that in two-way communication the pull agent transmits acknowledgment messages from the server to the client devices.

Furthermore, the segmentation of messages before their transmittal is well known in the art. Thus, given the teachings of Mann et al., it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani et al., in order to segment a message within a client device, and determine if at least one segment constitutes a complete message. The motivation for doing so would have been to efficiently transmit messages without having to rely on a particular delivery path, Mann et al., col. 5, lines 42-52. Therefore, the claimed invention (claim 12) would have been an obvious modification of the methods disclosed by Ramasubramani et al., in view of Mann et al.

16. In considering claim 13, although not explicitly stated, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, that the methods taught by Ramasubramani et al. provide for transmitting second acknowledgment messages acknowledging receipt of at least one message segment transmitted from the server, to the protocol gateway, to one of the plurality of client devices. See Ramasubramani et al., col. 7, lines 1-33.

17. In considering claim 14, the method of Ramasubramani et al. teaches:

a) transmitting from a protocol gateway, to one of a plurality of client devices, an acknowledgment message, (col. 7, lines 1-33);

The disclosed method of Ramasubramani et al., however, fails to explicitly disclose:

a) segmenting the message into first and second message segments, wherein each segment is not to exceed a defined maximum size;

b) determining that the message was not received by a gateway and retransmitting a second segment.

Nevertheless, the method of Mann et al. discloses:

a) segmenting the message into one or more message segments, none of which exceeds the maximum segment size, (col. 9, lines 30-33);

b) determining at a client device a transmission failure if a message is sent more than the value indicated in a resend field, (col. 8, lines 33-38);

c) retransmitting from a client device to a server, (col. 8, lines 27-38).

The segmentation of messages, before their transmittal, is well known in the art. It is also well known in the art that message segments do not always make it to their destination and are therefore resent by their sources. Thus, given the teachings of Mann et al., it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani et al., in order to segment a message into first and second messages within a client device, and to resend a second message if it is determined that a second message segment was not received at the protocol gateway. The motivation for doing so would have been to guarantee the transmittal of complete messages, Mann et al., col. 5, lines 30-52. Therefore, the claimed invention (claim 14) would have been an obvious modification of the methods disclosed by Ramasubramani et al., in view of Mann et al.

18. In considering claim 15, the method of Ramasubramani et al. teaches:

a) transmitting from a protocol gateway, to one of a plurality of client devices, an acknowledgment message, (col. 7, lines 1-33).

The disclosed method of Ramasubramani et al., however, fails to explicitly disclose:

a) determining at the protocol gateway that first and second message segments comprise a complete message.

Nevertheless, the method of Mann et al. discloses:

a) determining at a server device that at least one message segment constitutes a complete message, (col. 5, lines 30-49).

The segmentation of messages, before their transmittal, is well known in the art. It is also well known in the art that message segments do not always make it to their destination and are therefore resent by their sources. Thus, given the teachings of Mann et al., it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani et al., in order to determine at the protocol gateway that a first message segment and a second message segment comprise a complete message. The motivation for doing so would have been to guarantee the transmittal of complete messages, Mann et al., col. 5, lines 30-52. Therefore, the claimed invention (claim 15) would have been an obvious modification of the methods disclosed by Ramasubramani et al., in view of Mann et al.

19. In considering claims 16, the method of Ramasubramani et al. discloses:

a) a server adapted to run a server application, (col. 6, lines 25-39);

b) a plurality of agents coupled to the server, (col. 7, lines 1-5);

c) a plurality of protocol gateways, each of which is coupled to each one of the plurality of agents, (col. 3, lines 50-67, col. 4, lines 1-7);

d) a wireless network adapted to couple a server, through the plurality of agents, and the protocol gateway, to a plurality of client devices, each of which is adapted to run a client application, (Fig.'s 6-9, and col.9, lines 26-32);

e) transmitting a message from a server to one of a plurality of agents coupled to the protocol gateway, (col. 9, lines 61-67, col. 10 lines 1-19);

f) transmitting a message from a protocol gateway to one of a plurality of client devices, (col. 10, lines 16-19);

g) receiving the message at one of a plurality of client devices, and transmitting an acknowledgement message from one of the plurality of client devices to the protocol gateway, (col. 8, lines 27-35).

The method of Ramasubramani et al., however, fails to explicitly disclose:

a) a protocol gateway segmenting the message into one or more message segments, and determining if the message exceeds a defined maximum size;

b) determining at one of the plurality of client devices, that at least one message segment constitutes a complete message.

Nevertheless, the method of Mann et al. discloses:

a) within a server node, defining a maximum segment size, (col. 7, lines 26-31, col. 8, lines 49-55, col. 9, lines 28-30);

b) within a server node, determining if the message exceeds the maximum segment size, and segmenting the message into one or more message segments, none of which exceeds the maximum segment size, (col. 9, lines 30-33);

c) determining at a client device that at least one message segment constitutes a complete message, (col. 5, lines 30-49).

The segmentation of messages, in a communications system, is well known in the art. Thus, given the teachings of Mann et al., it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani et al., in order to segment a message within the protocol gateway, and determine if at least one segment constitutes a complete message at a client device. The motivation for doing so would have been to efficiently transmit messages without having to rely on a particular delivery path, Mann et al., col. 5, lines 42-52. Therefore, the claimed invention (claim 16) would have been an obvious modification of the methods disclosed by Ramasubramani et al., in view of Mann et al.

20. In considering claim 17, the method of Ramasubramani et al. teaches:

a) transmitting a message from one of a plurality of protocol gateways to one of a plurality of client devices, and receiving a message at one of a plurality of client devices, (col. 10, lines 16-19);

b) transmitting from one of a plurality of client devices, to one of a plurality of protocol gateways, an acknowledgment message, (col. 8, lines 27-35).

The disclosed method of Ramasubramani et al., however, fails to explicitly disclose:

c) within the protocol gateway, segmenting the message into first and second message segments, wherein each segment is not to exceed a defined maximum size;

d) within the protocol gateway, determining that the message was not received by a gateway and retransmitting a second segment.

Nevertheless, the method of Mann et al. discloses:

c) within a server, segmenting the message into one or more message segments, none of which exceeds the maximum segment size, (col. 8, lines 49-55, col. 9, lines 30-33);

d) determining at a server node a transmission failure if a message is sent more than the value indicated in a resend field, (col. 7, lines 26-31, col. 8, lines 33-38);

e) retransmitting from a server node to a client, (col. 8, lines 27-38).

The segmentation of messages, before their transmittal, is well known in the art. It is also well known in the art that message segments do not always make it to their destination and are therefore resent by their sources. Thus, given the teachings of Mann et al., it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani et al., in order

to segment a message into first and second messages within the protocol gateway, and to resend a second message if it is determined that a second message segment was not received at one of the plurality of client devices. The motivation for doing so would have been to guarantee the transmittal of complete messages, Mann et al., col. 5, lines 30-52. Therefore, the claimed invention (claim 17) would have been an obvious modification of the methods disclosed by Ramasubramani et al., in view of Mann et al.

21. In considering claim 18, the method of Ramasubramani et al. teaches:

a) transmitting from one of a plurality of client devices, to a protocol gateway, an acknowledgment message, (col. 8, lines 27-35).

The disclosed method of Ramasubramani et al., however, fails to explicitly disclose:

a) determining at the protocol gateway that first and second message segments comprise a complete message.

Nevertheless, the method of Mann et al. discloses:

a) determining at a server device that at least one message segment constitutes a complete message, (col. 5, lines 30-49).

The segmentation of messages, before their transmittal, is well known in the art. It is also well known in the art that message segments do not always make it to their destination and are therefore resent by their sources. Thus, given the teachings of Mann et al., it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani et al., in order

to determine at the protocol gateway that a first message segment and a second message segment comprise a complete message. The motivation for doing so would have been to guarantee the transmittal of complete messages, Mann et al., col. 5, lines 30-52. Therefore, the claimed invention (claim 18) would have been an obvious modification of the methods disclosed by Ramasubramani et al., in view of Mann et al.

22. Claims 19, 22-24, 27-29, 32, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani in view of Boyle.

23. In considering claims 19, 24, and 29, Ramasubramani discloses a method and apparatus comprising:

a) a message router for routing a message between the protocol gateway and the server, (col. 13, lines 42-56, col. 10, lines 60-62).

Although the method and apparatus of Ramasubramani shows substantial features of the claimed invention, they fail to show:

c) a means for authenticating an origin of a message before the message is routed, and a database relating to the routing and authentication of the message.

Nevertheless, in a similar field of endeavor where messages are communicated between client devices and servers, Boyle discloses a method comprising:

c) an authenticator for authenticating an origin of a message, wherein said authenticating means authenticates the origin before the message is routed by a link server 114, (col. 14, lines 21-34);

d) a database 328, which is accessible by the link server and adapted to store information relating to routing and authentication of the message, (col. 8, lines 52-67, col. 9, lines 1-2).

Authenticating the origin of messages by routers is well known in the art. Thus, given the teachings of Boyle, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani, in order to authenticate the origin of a message before routing the message between the protocol gateway and the server. This would have verified the integrity of the message by ensuring that the message is valid, authorized, and unaltered. Therefore, it would have been apparent to one of ordinary skill in the art to provide a router to authenticate the origin of a message in order to provide data identification while maintaining a secure system, Boyle et al., col. 2, lines 29-56.

25. In considering claims 22, 27, and 32, although the method and apparatus of Ramasubramani shows substantial features of the claimed invention, they fail to show:

a) routing the message corresponding to a key.

Nevertheless, routing messages corresponding to keys was well known in the art at the time of the present invention. This is exemplified by Boyle whose method teaches:

a) routing messages to a most specific server corresponding to a message key, (col. 16, lines 58-61).

Thus, given the teachings of Boyle, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani to show the message router routing the message to a most specific serve corresponding to a message key. Doing so would have allowed a secure means for communicating with the server by using the key to authenticate transactions between the gateway and the server, Boyle, col. 8, lines 57-61.

26. In considering claims 23, 28, and 33, Ramasubramani teaches the message router routing messages based on content of the message. See col. 13, lines 42-67.

27. Claims 20, 21, 25, 26, 30, 31, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani in view of Boyle, and further in view of Attanasio et al. (hereinafter Attanasio), U.S. patent 5,371,852.

28. In considering claims 20, 25, and 30, although the method and apparatus of Ramasubramani in view of Boyle shows substantial features of the claimed invention, they fail to show:

a) routing the message to a least recently used gateway.

Nevertheless, routing messages to least recently used devices, such as gateways or servers, was well known in the art at the time of the present invention. This

is exemplified by Attanasio in a similar field of endeavor that discloses load balancing across servers in a computer network comprising:

a) routing messages to a least recently used server, (col. 19, lines 10-21).

Thus, given the teachings of Attanasio, it would have been obvious to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani in view of Boyle, in order to route the message to a least recently used protocol gateway. This would have provided a more efficient method and apparatus by transparently routing the message to a gateway that has the least amount of load, Attanasio, col. 4, lines 64-68.

28. In considering claims 21, 26, and 31, Attanasio teaches routing messages to a least recently used nodes. See col. 19, lines 10-21. It would have been obvious to a person of ordinary skill in the art to modify the teachings of Ramasubramani and Boyle to show routing the message to the message router if the message router is a least recently used message router for the same reasons indicated in consideration of claims 20, 25, and 30.

29. Claims 34, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani in view of Frailong.

30. In considering claim 34, Ramasubramani discloses a system for communicating a message over a plurality of networks between a client device and a server comprising:

a) client devices, 202, 204, 206, to execute a client application, (col. 5, lines 57-67, col. 6, lines 1-9);

b) servers to execute server applications, (col. 6, lines 25-39);

c) a protocol gateway 214 encapsulating a fundamental network protocol, which underlies each of said one or more wireless network protocols, and communicates messages between the client and the server over a selected wireless network protocol independent of the selected wireless protocol, (col. 6, lines 10-24).

Although the disclosed method of Ramasubramani et al. shows substantial features of the claimed invention, it fails to explicitly disclose:

d) the protocol gateway being remotely manageable.

Nevertheless, in a similar field of endeavor, Frailong teaches a system for configuring a gateway comprising:

d) the gateway being remotely manageable, (col. 5, lines 18-34).

Thus, given the teachings of Frailong, it would have been apparent to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Ramasubramani , in order to make the protocol gateway remotely manageable. Doing so would have minimized the clients responsibilities by configuring and maintaining the protocol gateway remotely, Frailong, col. 2, lines 33-38.

34. In considering claim 35, Ramasubramani teaches the router located between the protocol gateway and a server. See Fig. 9.

35. Claims 36-41, are rejected under 35 U.S.C. 103(a) as being unpatentable over Mann in view of Ramasubramani.

36. In considering claim 36, Mann discloses a method for routing a message in a communications system comprising:

a) within a client device, defining a maximum segment size, (col. 8, lines 39-41, col. 9, lines 28-30);

b) within a client device, determining if the message exceeds the maximum segment size, and segmenting the message into one or more message segments, none of which exceeds the maximum segment size, (col. 8, lines 39-41, col. 9, lines 30-33);

c) determining at a client device that at least one message segment constitutes a complete message, (col. 5, lines 30-49).

Although the disclosed method Mann shows substantial features of the claimed invention, it fails to explicitly disclose:

d) transmitting from a protocol gateway to a message router a complete message.

Nevertheless, transmitting complete messages from protocol gateways to routers was well known in the art at the time of the invention. The system taught by Ramasubramani shows this, and comprises:

e) transmitting from a protocol gateway to a message router a complete message, (col. 13, lines 42-67).

Thus, given the teachings of Ramasubramani, it would have been apparent to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Mann, in order to show transmitting complete messages from a protocol gateway to a router. This would have made the system taught by Ramasubramini more robust and attractive to users who wish to communicate with networks having different network characteristics Ramasubramani, col. 6, lines 10-24.

37. In considering claim 37, it is implicit in the teachings of Mann that if a size exceeds the maximum segment size, segmenting the message into a first message segment and a second message segment, neither of the first message segment and the second message segment exceeding the maximum segment size. See col. 9, lines 28-33.

38. In considering claim 38, Mann teaches a server determining that a first message segment and a second message segment comprising a complete message. See col. 5, lines 42-49.

39. In considering claim 39, the method of Mann discloses:

a) within a server node, defining a maximum segment size, (col. 7, lines 26-31, col. 8, lines 49-55, col. 9, lines 28-30);

b) within a server node, determining if the message exceeds the maximum segment size, and segmenting the message into one or more message segments, none of which exceeds the maximum segment size, (col. 9, lines 30-33);

c) determining at a client device that at least one message segment constitutes a complete message, (col. 5, lines 30-49).

Although the disclosed method Mann shows substantial features of the claimed invention, it fails to explicitly disclose:

d) the server being a protocol gateway.

Nevertheless, protocol gateways were well known in the art at the time of the invention. The system taught by Ramasubramani shows this, and comprises:

d) a protocol gateway facilitating the transfer of messages between a plurality of wireless devices, (col. 3, lines 50-67, col. 4, lines 1-7).

Thus, given the teachings of Ramasubramani, it would have been apparent to a person of ordinary skill in the art, at the time of the present invention, to modify the teachings of Mann, in order to show a protocol gateway segmenting messages. This would have made the system taught by Ramasubramini more robust and attractive to users who wish to communicate with networks having different network characteristics Ramasubramani, col. 6, lines 10-24.

40. In considering claim 40, it is implicit in the teachings of Mann that if a size exceeds the maximum segment size, segmenting the message into a first message segment and a second message segment, neither of the first message segment and the second message segment exceeding the maximum segment size. See col. 9, lines 28-33.

41. In considering claim 41, Mann teaches a server determining that a first message segment and a second message segment comprising a complete message. See col. 5, lines 42-49.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ramasubramani et al., U.S. Patent 6,507,589 discloses a method and apparatus for routing between network gateways and service centers.

Boyle et al., U.S. Patent 6,138,158 discloses a method for routing messages in a communications system.

Mann et al., U.S. Patent 5,167,035 discloses a method for transferring messages between a client and a server in a network.

Frailong et al., U.S. Patent 6,012,100 discloses a remotely managed gateway.

Attanasio et al., U.S. Patent 5,371,852 discloses a method for routing to least recently used nodes.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hassan Phillips whose telephone number is (703) 305-8760. The examiner can normally be reached on M-F 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (703) 308-6687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ZARNI MAUNG
PRIMARY EXAMINER